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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/522,539

01/27/2005

Neil Bonnette Graham

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EXAMINER

PALO, FRANCIS T

ART UNIT

PAPER NUMBER

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05/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/522,539	Applicant(s) GRAHAM ET AL.	
	Examiner Francis T. Palo	Art Unit 3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-21 and 27-32 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-18, 20, 21 and 27-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 2/19/08 has been entered.

DETAILED ACTION

Response to Amendment / Remarks-Arguments

Applicant's arguments filed 2/19/08 have been fully considered but they are not persuasive.

The examiner maintains that a *prima facie* case of obviousness has been shown by the office, in that **Veronesi '387** teaches a plant cultivation system comprising a water insoluble polymer, specifically poly(ethylene oxide), which is placed close to the roots of plants growing in pots or containers, and that **Anderson '834** teaches a moisture-absorbing polymer can "simply be dumped or otherwise deposited in the hole in which the seed or seedling is to be planted,

preferably, however in reforestation and similar applications, these components are packaged in a container that is designed to be planted with the seedling in a porous sealed conformable bag-like enclosure”.

Anderson is analogous art, and in teaching depositing hydrophilic gels (as does Veronesi) directly in the hole further provides the motivation for enclosing the gel(s) in a porous bag as claimed.

It is respectfully maintained that the combination of Veronesi and Anderson is proper, as where a claimed improvement on a device or apparatus is no more than "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement," the claim is unpatentable under 35 U.S.C. 103(a). *Ex Parte Smith*, 83 USPQ.2d 1509, 1518-19 (BPAI, 2007) (citing *KSR v. Teleflex*, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007)).

Accordingly, applicants claim a combination that only unites old elements with no change in the respective functions of those old elements, and the combination of those elements yields predictable results; absent evidence that the modifications necessary to effect the combination of elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a). *Ex Parte Smith*, 83 USPQ.2d at 1518-19 (BPAI, 2007) (citing *KSR*, 127 S.Ct. at 1740, 82 USPQ2d at 1396).

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Accordingly, since the applicants have submitted no persuasive evidence that the combination of the above elements is uniquely challenging or difficult for one of ordinary skill in the art, the claim is unpatentable as obvious under 35 U.S.C. 103(a) because it is no more than the predictable use of prior art elements according to their established functions resulting in the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for improvement.

Further, the incorporation of previously rejected claim-4 does not place the independent claim in condition for allowance, as the product-by-process recitation does not serve to distinguish the water insoluble polymer as taught by Veronesi from the prior art.

NOTE:

In the original claim set presented 1/27/05, claims were directed to a plant cultivation system and to a method of using the plant cultivation system, whereby a restriction requirement was made by the office resulting in an election of the plant cultivation system, specifically claims 1, 3-18, 20 and 21.

While the examiner has given prior art consideration to all the elected dependent claims, applicants have directed their remarks specifically to the independent claim and have not yet specifically argued the rejections of the dependent claims.

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The examiner further submits that some of the original dependent claims while they have been given consideration by the examiner, are not considered to be system (or apparatus) claims, rather process or intended use claims, and perhaps applicants may have been advised as such by their representative, thus possibly the absence of traversal of the dependent claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 5-18, 20, 21 and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Veronesi '387** in view of **Anderson '834**.

Regarding **claim-1**:

The examiner maintains that a *prima facie* case of obviousness has been shown by the office, in that **Veronesi '387** teaches a plant cultivation system comprising a water insoluble polymer, specifically poly(ethylene oxide), which is placed close to the roots of plants growing in pots or containers (analogous to the instant intended use), and that **Anderson '834** teaches a moisture-absorbing polymer that can "simply be dumped or otherwise deposited in the hole in which the seed or seedling is to be planted, preferably, however in reforestation and similar applications, these components are packaged in a container that is designed to be planted with the seedling in a porous sealed conformable bag-like enclosure". See col.-4, line-52 thereabout.

Anderson is analogous art, and in teaching depositing hydrophilic gels (as does Veronesi) directly in the hole, further provides the motivation for enclosing the gel(s) in a porous bag as claimed. Therefore, the rejection of claim-1 as submitted on 10/18/07 is maintained.

As regards the new claim language "*which has been rendered insoluble in water by physical or chemical cross-linking*" as now claimed, this language is considered to be a product-by-process limitation within an apparatus claim which is improper and the domain of a method claim. Furthermore, the limitation does not distinguish the claimed hydrogel from the prior art hydrogels which are known to be rendered insoluble as claimed.

Regarding previously presented **claims 3, 5-18, 20 and 21**:

As discussed above, those claims have yet to be specifically argued in light of the prior art presented, and as such their rejections are maintained and incorporated herein by reference only, as they are a matter of record.

Regarding new **claim-27**:

The discussion above regarding claim-1 is relied upon.

It is unclear what applicants intend by predetermined water release characteristics based upon a plant and container to which the hydrogel is applied, as claimed, as a search of the specification for "predetermined water release" or "water release" do not return any hits on that language. Are applicants intending that the amount of hydrogel by volume is related to the predetermined water release, as discussed at lines 29-31 of the instant specification?

Anderson does teach that in shallow plantings lower amounts of moisture absorbing materials will be employed so that this material will not swell to the extent that it might push the seedling out of the ground (col.-7, line-30 thereabout).

Again the instant claim appears to be a combination of structure and intended use.

Regarding new **claim-28**:

The discussion above regarding claim-27 is relied upon.

The examiner takes official notice that water release characteristics of hydrogels are based upon inter alia at least the particle size of the hydrogel as claimed.

Regarding new **claim-29**:

The discussion above regarding claim-27 is relied upon.

It is not clear if applicants are intending a negative limitation, whereby the water release characteristics of the hydrogel are not affected by fertilizers or salts as claimed, as both Veronesi and the instant invention teach the claimed poly(ethylene oxide) as an insoluble polymer.

Regarding new **claim-30**:

The discussion above regarding claim-1 is relied upon.

As discussed above in the rejection of claim-1, Anderson teaches a moisture-absorbing polymer that can “simply be dumped or otherwise deposited in the hole in which the seed or seedling is to be planted, preferably, however in reforestation and similar applications, these components are packaged in a container that is designed to be planted with the seedling in a porous sealed conformable bag-like enclosure”. See col.-4, line-52 thereabout.

Regarding new **claim-31**:

The discussion above regarding claim-1 is relied upon.

The examiner takes official notice that the poly(ethylene oxide) as taught by Veronesi is capable of the absorption and release rates as claimed.

Regarding new **claim-32**:

The discussion above regarding claim-31 is relied upon.

Anderson teaches both bursting and non-bursting applications as claimed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francis T. Palo whose telephone number is 571-272-6907. The examiner can normally be reached on M-Tu.,Th.-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mansen can be reached on 571-272-6608.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Francis T. Palo/
Primary Examiner
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